

**Work Order ID 80803**

February-29-12 11:39:31 AM

**\*80803\***

Page 1

Item ID: D2244-116

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Step Extrusion

Start Date: 2/29/12 Start Qty: 80.00

**\*80\***

Cust Item ID:

Required Date: 3/09/12 Req'd Qty: 80.00

**\*80\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan Accept Reject Reject Insp.  
Code Qty Qty Number Stamp

Draw Nbr

Revision Nbr

D2244

Rev D1

100

0.00

**\*100\***

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 16319 a) Extrude as per Dwg D2244b) Material:  
6061-T6 (QQ-A-200/8)c) Minimum yield tensile strength = 35 ksid)  
Minimum ultimate tensile strength = 38 ksi e) Minimum elongation = 8%f)  
Order at 116" longg) Caradon Indalex Tool # M

CH 12/03/01 80

110

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

**\*110\***

Packaging

Memo

0.00

Packaging

Ensure certification are attached

6/23/15 (93)

120

QC6- Inspect dimensions to drawing

0.00

**\*120\***

QC

Memo

0.00

Quality Control

Check Pull test per Dwg D2244 for compliance page attached. Check hardness  
with Webster tester

6/23/15

02/01/15  
(93)

# Work Order ID 80803

February-29-12 11:39:31 AM

**\*80803\***

Page 2

Item ID: D2244-116

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Step Extrusion

Start Date: 2/29/12 Start Qty: 80.00

**\*80\***

Cust Item ID:

Required Date: 3/09/12 Req'd Qty: 80.00

**\*80\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan  
Code Accept Reject Reject Insp.  
Qty Qty Number Stamp

130

Identify as per dwg & Stock Location: WA

0.00

**\*130\***

Packaging

Packaging

*Pull at r20 for QC inspection*

0.00

*Ac 12.03.29*

*(X80)*  
*(X93)*

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

*12/3/29*

*mk*  
*12-03-29*

# Picklist Print

February-29-12 11:39:30 AM

Page 1

Work Order ID: 80803

Parent Item: D2244-116

Parent Item Name: Step Extrusion

Start Date: 2/29/12

Start Qty: 80.00

Required Date: 3/09/12

Required Qty: 80.00

Comments: IPP: A 24.03.04 New Issue KJ

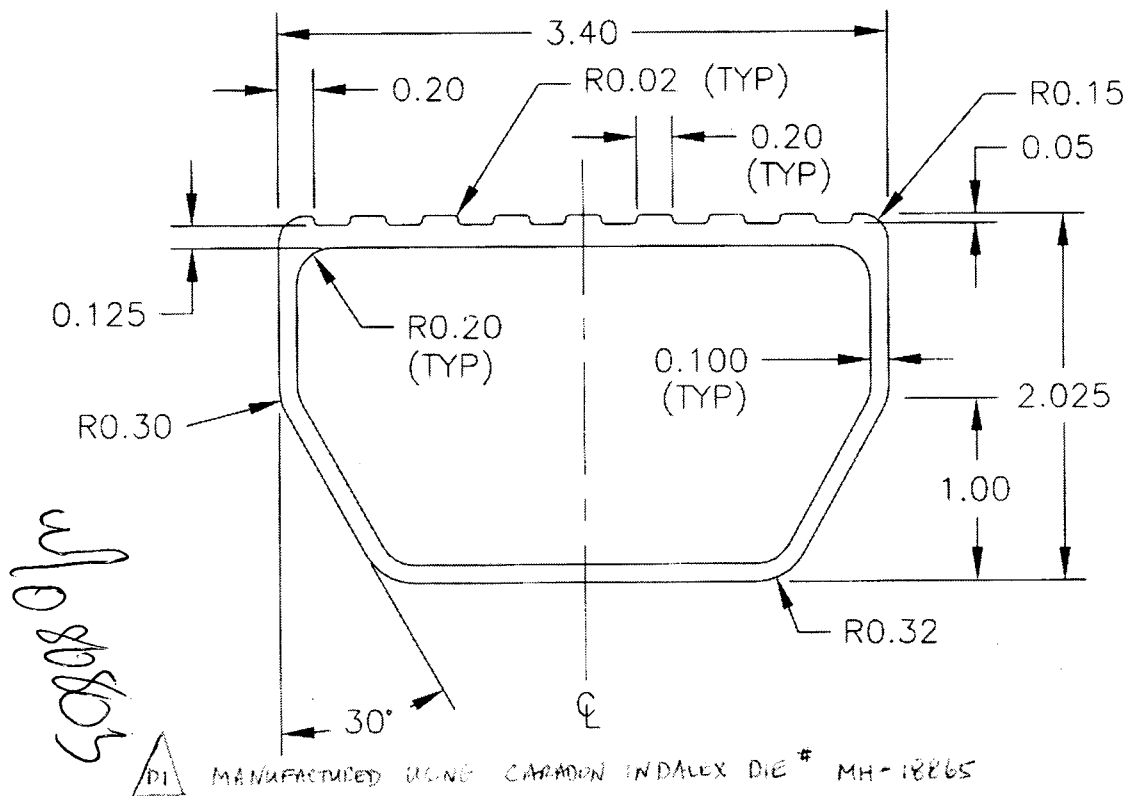
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2244-116P Step Extrusion		Purchased	No			110	Each	0.0000	1	80			

6/14/3/15 (93)



DESIGN	DRAWN BY	DART AEROSPACE LTD	
BW	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
<i>KE</i>	<i>[Signature]</i>	D2244	SHEET 1 OF 1
DATE	TITLE		SCALE
98.11.18	STEP EXTRUSION		1:1
A	94.07.05	NEW ISSUE	
B	94.07.11	REDESIGNED	
C	94.08.08	REDESIGNED	
D	98.11.18	REMOVED 6005A MATERIAL INCORPORATED DEO 9081	
D1	01.04.17	ADDED DIE #	<i># CP</i>

RELEASED  
13.11.25 KE



MANUFACTURED USING CARBON INDALEX DIE # MH-18865

PART NUMBER D2244-XX.X  
XX.X IS CUT LENGTH IN INCHES

MATERIAL: 6061-T6 (QQ-A-200/8)

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi  
MINIMUM ELONGATION = 8%

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO16319

Purchase Order Date 3/01/12

PO Print Date 3/08/12

Page Number 1 of 1

Order From :

VC-SAP001

SAPA CANADA INC  
LOCKBOX B9427  
PO BOX 9100  
POSTAL STATION F  
TORONTO, ONTARIO M4Y 3A5  
CANADA

Contact Name

Vendor Phone 800 563 5120

Vendor Fax 800 563 8310

Vendor Account Nbr 201355

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

RECEIVED

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2244-116P	Step Extrusion	3/16/12 Yes	80.00 Each	Yours ppd	\$31.6780	\$2,534.24

Special Inst: EXTRUDE AS PER DWG D2244 REV. D1  
B80803  
MATERIAL: 6061-T6 AS PER QQ-A-200/8  
MINIMUM YIELD TENSILE STRENGTH  
= 35 KSI  
MINIMUM ULTIMATE STRENGTH = 38  
KSI  
MINIMUM ELONGATION = 8%  
SIZE: 116" LONG  
DIE TOOL # MH-18865

PO Total:

\$2,534.24

Change Nbr: 3

Change Date: 3/08/12

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

## Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**  
Adresse / Address : **270 ABERDEEN STREET  
HAWKESBURY ONT,  
K6A 1K7**

# commande Sapa / Sapa order # : **2030090**

# bon de commande / Purchase order # : **16319**

# de matrice / Die # : **MH 18865**

Description : **Step Extrusion**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part # : **D2244**

# Contrôle / Control # : **63559-1**

# Coulée / Cast # : **53416**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	42 795
Contrainte élastique Yield stress (psi)	35 000	40 401
% élongation dans 2" % elongation in 2"	8	10
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	93

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen) .

Sincèrement vôtre, date : **2012-03-17**  
Yours truly,



Gilles Pelletier  
Technicien de la qualité  
Quality technician